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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,766	10/19/2004	Peter Clive Bridges	04-870	6029
20306	7590	05/11/2007		
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP			EXAMINER	
300 S. WACKER DRIVE			ALI, SHUMAYA B	
32ND FLOOR				
CHICAGO, IL 60606			ART UNIT	PAPER NUMBER
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			05/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/511,766	<b>Applicant(s)</b> BRIDGES ET AL.	
	<b>Examiner</b> Shumaya B. Ali	<b>Art Unit</b> 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 2/23/07 have been fully considered but they are not persuasive.

Applicant's amended claim 1 requires "a seal adapted to seal **against** the periphery of the user's face when worn" and Applicant alleged that neither Tischer US'031B1 nor Andrews US '985 teach such limitation (see remark filed on 2/23/07 page 5, lines 14-18, and page 6, lines 17-22).

With respect to Tischer, Applicant argued, "support frame 148 does not contact the users face and cannot form a seal "against" the user's face" (see page 6, lines 6 and 7 of the remark filed on 2/23/07). This argument is not well taken because claimed invention does not require support frame to contact the users face. Furthermore, the limitation of "adapted to seal against the periphery of the user's face" is part of a functional recitation, which is not given much weight in an apparatus claim. This means, Tischer is only required to teach a "seal" structure on the first sub-assembly that is **capable** of being adapted to seal against the periphery of the user's face when worn. As recognized by the Applicant that Tischer's support frame when operable ("when worn") with the facemask provides a "seal" where facemask is connected to a hood (see page 6, lines 4 and 5 of the remark filed on 2/23/07). Notice, the facemask sits around the periphery of the hood, and the hood sits around the periphery of the user's face (see fig.12 of Tischer). Thus, the support member creating a seal where the facemask connects to the hood would inherently create a seal against the periphery of the user's face. Furthermore, if the hood is worn by a user

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having a bigger head than the hood, then the hood would be little too tight to accommodate that user's face, thereby the support member would inherently create a seal against the periphery of that user's face. Thus, Tischer teaches a seal that is capable of being adapted to seal against the periphery of the user's face when worn.

With respect to Andrews, Applicant argued, "Andrews et al. seal forms a seal between the two subassemblies—the hood and the face piece of the respirator—and it does not provide a seal against the wearer's face" (see page 6, lines 18 and 19 of the remark filed on 2/23/07). This argument is not well taken because as discussed above that the limitation of "adapted to seal against the periphery of the user's face" is part of a functional recitation, which is not given much weight in an apparatus claim. This means, Andrews is only required to teach a "seal" structure on the first sub assembly that is **capable** of being adapted to seal against the periphery of the user's face when worn. Notice, structure 5c on the hood (see fig.4 of Andrews) would seal against a user's face when worn by a user with a bigger head. Thus the seal of Andrews is capable of being adapted to seal against the periphery of the user's face "when worn" by a user with bigger head compared to the hood.

For the above stated reasons previous rejection set forth using Tischer US'031B1 and Andrews US '985 is maintained.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1,2,4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tischer et al US Patent No. 6,328,031**

**Regarding claim 1,** Tischer et al. disclose hood and face mask assembly (110) in figures 12 and 13. Tischer et al. further disclose a first sub-assembly (113) adapted to be worn on the head and including a seal (148) adapted to seal against the periphery of the user's face when worn (col.7 lines 49-51, support frame 148 prevent formation of gaps between annular edge 147 of the hood 113 and the face mask 112 during use, thus support frame 148 is forming a seal around the periphery of the user's face), and a second sub-assembly (112) separable from the first subassembly but selectively co-operable therewith (see col.2 line 36-38, "hood is detachably connected face mask so as to secure the annular edge of the hood in the annular recess of the face mask", see also col.9 lines 18-22, "face mask can be attached to the firefighting hood before donning them. The firefighter can then re-don his firefighting helmet without disrupting the operative relationship of the firefighting hood to the face mask"), the second subassembly comprising a face piece (112) adapted to co-operate with the first sub assembly to define therewith a facial cavity (116) bounded by said seal, an inlet (118) connectable to a source of breathing gas for supply (col.6 lines 23-25 "a channel 118 for providing fluid communication between the breathing chamber of the face Mask and a breathing apparatus") to the user, and an outlet (oval aperture depicted on mask in figure 13, see labeled fig.13 attachment below) for the exhaustion of exhaled gas from the user.

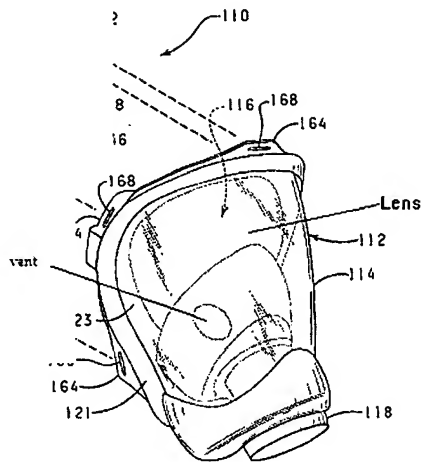
**Regarding claim 2**, Tischer et al. disclose wherein the first and second sub-assemblies are completely separable whereby the first sub-assembly can be worn alone, the second sub-assembly being demountable attachable to the first-subassembly (see col.2 line 36-38, “hood is detachably connected face mask so as to secure the annular edge of the hood in the annular recess of the face mask”, see also col.9 lines 18-22, “face mask can be attached to the firefighting hood before donning them. The firefighter can then re-don his firefighting helmet without disrupting the operative relationship of the firefighting hood to the face mask”).

**Regarding claim 4**, Tischer et al. disclose wherein the second sub-assembly is articulated to the first sub assembly (as seen in figure 13)

**Regarding claim 5**, Tischer et al. disclose wherein the first sub-assembly comprises headgear in the form of a flexible hood of air-permeable material (“Nomex”, see col.6 lines 65-67, is considered air permeable material).

**Regarding claim 6**, Tischer et al. disclose wherein the second sub assembly includes an oronasal mask (as seen in figures 12 and 13) to be disposed within said facial cavity.

**Regarding claim 7**, Tischer et al. disclose wherein said face piece including a demountable lens portion (see labeled fig.13)



Prior Art

U.S. Patent  
US 6,328,031 B1

FIG. 13

**Claims 1-5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Andrews et al. US Patent 2,935,985.**

**Regarding claim 1,** Andrews et al. disclose a respirator assembly comprising: a first sub-assembly (figures, 1,2, reference objects 1,2,4,5,15) adapted to be worn on the head and including a seal (fig.4, 5c) adapted to seal against the periphery of the user's face when worn; and a second sub-assembly (fig.4, 3) separable from the first sub-assembly but selectively co-operable therewith (detachable by unlocking a clamp, see col.5 lines 10-50), the second sub-assembly comprising a face piece (fig.4,3) adapted to co-operate with the first sub-assembly to define therewith a facial cavity (space created between face of the user and face piece, as depicted in figure 4) bounded by said seal, an inlet (col.5 lines 53-57, "inhalation valve" providing inlet) connectable to a source of breathing gas for supply to the user and an outlet (fig.5, 33a) for the exhaustion of exhaled gas from the user (col.5 lines 57-62).

**Regarding claim 2**, Andrews et al. disclose wherein the first and second sub-assemblies are completely separable whereby the first sub-assembly can be worn alone, the second sub-assembly being demountably attachable to the first sub-assembly (sub assemblies can be separated by unlocking, see col.4 lines 34-42, col.5 lines 10-48).

**As to claim 3**, Andrews et al. disclose wherein the first sub-assembly comprises headgear including a substantially rigid ring structure (15) adapted to be juxtaposed to the user's face when the headgear is donned and from which said seal extends to engage around the periphery of the user's face (5c), the second sub-assembly being configured to be mounted to said ring structure and secured thereto by at least one releasable fastener (fig. 4, 22-25,28,29, see also col.5, lines 10-48).

**As to claim 4**, Andrews et al. disclose wherein the second sub-assembly is articulated to the first sub-assembly (col.5 lines 10-48).

**As to claim 5**, Andrews et al. disclose wherein the first sub-assembly comprises headgear in the form of a flexible hood of air-permeable material (col.3 lines 20-25).

**As to claim 7**, Andrews et al. disclose wherein said face piece includes a demountable lens portion (col. 4 lines 10-48, fig.3 further depicts face piece as being demountable lens).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary



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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews et al. US Patent 2,935,985 in view of Bonhomme et al. US Patent 6,520,177 B1.**

As to claim 6, Andrews et al. disclose the claimed invention as applied for claim 1 with the exception of wherein the second sub-assembly includes an oronasal mask to be disposed within said facial cavity. However, Bonhomme et al. in a device for providing protection against hypoxia, usable in a hostile environment teach an oral nasal mask fitted within a face cover with an admission coupling for breathing gas, generally filtered air provided by a blower, and a breathe

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out valve leading to the atmosphere through the face cover (see col.1 lines 30-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the face piece of Andrews in with an oro-nasal mask for the purposes of providing coupling for breathing gas, which would further ensure delivery of breathable gas to the user as taught by Bonhomme.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

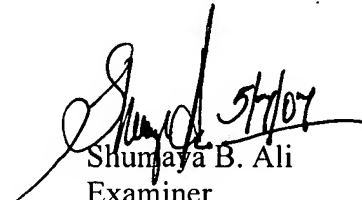
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shumaya B. Ali whose telephone number is 571-272-6088. The examiner can normally be reached on M-W-F 8:30am-5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Shumaya B. Ali  
Examiner  
Art Unit 3771

  
JUSTINE R. YU  
SUPERVISORY PATENT EXAMINER  
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5/9/07